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EXAMINER

HARTMAN JR, RONALD D

ART UNIT PAPER NUMBER

2121

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/628,155

Applicant(s)

CLARK ET AL.

Examiner

Ronald D. Hartman Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date. <u>10/628,155</u> | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

1. Claims 1-4 and 6-19 are presented for further examination.

#### ***Claim Objections***

2. Claim 7 does not further limit claim 1. That is, claim 1 already sets forth sending the changed instruction to a manufacturing workstation for display, and therefore the language of claim 7 does not further limit the scope of claim 1. Therefore, it will be treated utilizing the same rejections set forth with regards to pending claim 1.

Claim 17 should read "workstation" in line 4, not "station".

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 4, 6-7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 2, "said manufacturing line" lacks proper antecedent basis.

As per claims 4 and 7, Firstly, "said first and second manufacturing components" lacks proper antecedent basis. Therefore, the step of "highlighting at least one of" has been interpreted to be the functional equivalent of "highlighting at least one location of a first manufacturing component and (as per the applicants operative wording of the claim; line 2) a location of a second manufacturing component. In other words, a first or second manufacturing component.

As per claim 6, "said second manufacturing component" lacks proper antecedent basis. Therefore, this claim has been interpreted to be the functional equivalent of a step of "ordering more than one manufacturing component in response to the changed

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manufacturing instruction.” In other words, ordering components (i.e. parts) for a product in response to changing the components (i.e. parts) for a product.

As per claim 12, “said time based event” does not have proper antecedent basis.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 7-9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by LaLonde et al., U.S. Patent No. 6,240,328.

As per claims 1 and 7, LaLonde et al. teaches a computer-implemented method for displaying a changed manufacturing instruction comprising the steps of:

- establishing a desired fluid change associated with a manufacturing characteristic (e.g. interpreted to be the functional equivalent of changing any manufacturing characteristic of any product; Abstract; Figure 1; C2 L31-42; C2 L53-61);
- enabling a change in a manufacturing instruction in response to the desired fluid change (e.g. interpreted to be the functional equivalent of the “establishing” step, from above, since this limitation appears to essentially be claiming the same features, that is to determine and implement a change in a manufacturing characteristic with regards to a manufacturing component of any product; Abstract; Figure 1; C2 L31-42; C2 L53-61); and
- displaying the changed manufacturing instruction associated with a manufacturing component on a display screen associated with a first manufacturing workstation (e.g. Interpreted to correspond to displaying the “established” and “enabled”

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changed instruction on any workstation which is associated with the manufacturing process; C2 L53-61; Figure 1).

As per claim 8, LaLonde et al. teaches pulling changed instructions from a repository (e.g. Figure 2 element 20).

As per claim 9, the rejection of claim 1 is applied equally herein.

Furthermore, LaLonde et al. further teaches a time-based event being responsible for the displaying of a changed manufacturing instruction (e.g. "in response to a unique configuration being ordered"; C9 L15-20", wherein the actual order would be a "time based event" which would be responsible for the displaying of a changed manufacturing instruction.

As per claim 12, the rejection of claim 1 is applied equally herein.

Furthermore, LaLonde et al. further teaches a computer controller and a plurality of workstations with respective displays (e.g. Figure 1).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaLonde et al., as applied to claim 1 above, in view of Official Notice.

As per claim 2, LaLonde does not specifically teach stopping a manufacturing line if a changed manufacturing instruction is not performed. However, Official Notice is taken with respect to this feature. That is, since it is blatantly obvious, from a

manufacturing standpoint, that if a desired manufacturing change is not actually performed, then the product being manufactured will not be the product that is desired. Therefore, it stands to reason that in order to avoid the manufacturing line from continuously performing manufacturing operations that are no longer desired, the movement of products along the manufacturing line, or the actual manufacturing line itself, would obviously be suspended so as to avoid producing the wrong product, and this would have been obvious to one of ordinary skill in the art at the time the invention was made.

As per claim 6, LaLonde does not specifically teach ordering components in response to the changed manufacturing instruction. However, Official Notice is taken with regards to such feature. That is, since it would be impossible for the dynamic assembly line to implement the instructions if the parts (i.e. components) were not available, it stands to reason that the parts would either be immediately available or they would not be. If the parts were not available, wouldn't they need to be ordered first? This seems obvious enough and reads on the "ordering" feature of this claim. However, in addition, it also seems obvious to re-order parts which are currently being utilized, and therefore a feature wherein a reordering step occurs is yet another feature that the Examiner would hold Official Notice over since obviously you would not want to run out parts (i.e. components) and therefore a manufacturer would need to order replacement parts since current supply levels are limited by nature. It is both these concepts that the Examiner takes Official Notice, that is, ordering parts after a change and reordering parts which are being used during actual production, both being well known features in the generic art of manufacturing control systems and both of which would have been obvious to one of ordinary skill in the art at the time the invention was made.

As per claim 19, Official Notice is taken with respect to a feature, used in manufacturing, wherein an old part (i.e. component) is used up before utilizing a new part (i.e. component) during manufacturing of a product. This is a well known method for

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optimizing the use of available resources, since it produces less waste than by simply switching from one part to another by exhausting the supply of the old parts before using new ones, and this well known methodology would have been obvious at the time the invention was made in order to optimize the manufacturing of the desired products.

7. Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaLonde et al., in view of Sakamoto et al., U.S. Patent No. 5,341,304.

As per claim 18, the rejection of claims 1, 9 and 12 are applied equally herein.

Furthermore, as per claims 3 and 18, LaLonde does not specifically teach changing the instruction, for a second workstation, on a second display if the change is not performed by a first workstation.

Sakamoto teaches this feature for use in an assembly line (e.g. See claim 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Sakamoto into the system disclosed by LaLonde for the purpose of making sure that products are produced in accordance with the necessary changes, thereby producing a more reliable and efficient assembly of a manufactured product, and this would have been obvious to one of ordinary skill in the art at the time the invention was made.

8. Claims 4, 10-11 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaLonde et al., in view of Hirota, U.S. Patent No. 6,477,437.

As per claims 4, 10 and 11, LaLonde et al. does not specifically teach highlighting a location of a component associated with a changed manufacturing instruction (claim 4), emphasizing the changed manufacturing instruction in response to an event (claim 10) nor stopping the emphasis in response to a second event (claim 11).

Furthermore, as per claim 13, and as best understood, LaLonde et al. does not specifically teach a time-based event being a predetermined time. What does time based event mean specifically? Are not all events time based? Essentially, claim 13

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appears to equate to "the event is a time determined in advance". This claim has been interpreted to add a feature to claim 1 wherein the displaying of the changed manufacturing instruction, on the workstation display, *occurs in response to a time based event*, the time based event being representative of a time, the time being determined in advance. This feature is not specifically taught by LaLonde et al.

Furthermore, as per claims 14-17, LaLonde et al does not specifically teach identifying an operator and displaying the changed manufacturing instruction in response to the operator identification (claim 14), identifying a characteristics of the operator (claim 15), displaying the changed manufacturing instruction in response to the identified operator characteristic (claim 16) nor the operator characteristics being whether the operator is new to the workstation or whether the operator needs help (claim 17).

Hirota teaches all of the aforementioned features which LaLonde lacks. That is, Hirota teaches highlighting a location of a component associated with a changed manufacturing instruction (claim 4)(e.g. C16 L32-39), emphasizing the changed manufacturing instruction in response to an event (claim 10)(e.g. C16 L32-39), stopping the emphasis in response to a second event (claim 11)(e.g. completion of a step; C18 L56-60), displaying of the changed manufacturing instruction, on the workstation display, occurs in response to a time based event, the time based event being representative of a time, the time being determined in advance (claim 13)(e.g. C22 L9-16), identifying an operator and displaying the changed manufacturing instruction in response to the operator identification (claim 14)(e.g. C22 L9-53 and C24 L47-58), identifying a characteristics of the operator (claim 15)( e.g. C22 L9-53 and C24 L47-58), displaying the changed manufacturing instruction in response to the identified operator characteristic (claim 16) (e.g. C22 L9-53 and C24 L47-58) and the operator characteristics being whether the operator is new to the workstation or whether the operator needs help (claim 17)( e.g. C22 L9-53 and C24 L47-58).



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It would have been obvious to OORSTA (one of ordinary skill in the art) to incorporate the teachings of Hirota into the system disclosed by LaLonde for the purpose of providing an assembly line control system which can interactively communicate with an operator so that the instructions, for each step in the manufacturing process, can be displayed and demonstrated and so that system can provide interactive help or aid to the operator, based on the needs or characteristics of the operator, in order to form a more efficient means of displaying changed manufacturing instructions to an assembly line operator, in order to aid the individual worker and to monitor the individual workers proficiency, and this would have been obvious to one of ordinary skill in the art at the time the invention was made.

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D. Hartman Jr. whose telephone number is (571) 272-3684. The examiner can normally be reached on Mon.-Fri., 11:30 - 8:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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